

CLAIMS

1. A method of reducing or preventing transfer of contamination from a contaminated surface; comprising coating a contaminated surface or a portion thereof with a
5 adherent antimicrobial barrier composition, comprising:
from about 0.1 to about 25% (wt) of a gelling or thickening agent;
from about 0.1 to about 10% (wt) of an emulsifier or stabilizer;
from about 0.05 to about 10% (wt) of a surfactant; and
an antimicrobial agent, whereby transfer of contamination from the surface is reduced or
10 precluded.
2. The method of claim 1, wherein the adherent antimicrobial barrier composition further comprises from about 0.1 to about 15% (wt), or about 1 to about 5% (wt), of one or more C₁₋₁₀ alcohols.
3. The method of claim 1, wherein the gelling or thickening agent is present in an
15 amount selected from the group consisting of from about 0.1 to about 4% (wt), from about 5 to about 15% (wt), and about 2.5% (wt), and is selected from the group consisting of pectin, methylated pectin, gelatin, hydrosylated gelatin, agar, cornstarch, cross-linked starch, depolymerized starch, gelling vegetable protein product, sodium alginate, carrageenan, and combinations thereof.
- 20 4. The method of claim 1, wherein the emulsifier or stabilizer is present in an amount selected from the group consisting of from about 0.1 to about 1% (wt), from about 1 to about 5% (wt), and about 0.2% (wt), and is selected from the group consisting of calcium lactate, lecithin, glycerol, and combinations thereof.
5. The method of claim 1, wherein the surfactant is present in an amount selected
25 from the group consisting of from about 0.05 to about 0.5% (wt), from about 1 to about 5% (wt), and about 0.2% (wt), and is selected from the group consisting of sodium lauryl sulfate, Tween 20, 40, 60, and 80, and combinations thereof.
6. The method of claim 1, wherein the antimicrobial agent is at least one of an acidic agent and a basic agent, present in an amount selected from the group consisting of from

about 0.1 to about 15% (wt), from about 1 to about 5% (wt), and about 2% (wt), suitable to impart a pH of less than about 3, or greater than about 10, and is selected from the group consisting of acetic acid, citric acid, and lactic acid, acidified calcium sulfate, acidified sodium chlorite, peracetic acids, percarbonates, ammonium hydroxide, quaternary ammonium salts, cetylpyridinium chloride, polyphosphates, glycolic acid, sodium metasilicate, trisodium phosphate, and combinations thereof.

7. The method of claim 1, wherein the antimicrobial agent is selected from the group consisting of proteases, lipases and phospholipases, alcohols, and combinations thereof

8. The method of claim 1, wherein the antimicrobial agent is heat.

9. The method of claim 1, further comprising, prior to coating, heating the adherent antimicrobial barrier composition to a temperature equal to or greater than 80°C.

10. The method of claim 1, wherein the antimicrobial barrier composition is provided as a formulation selected from the group consisting of semi-solids, gels, liquids, syrups, aerosolized formulations, foams, colloidal suspensions, and combinations thereof.

11. A method of reducing or precluding transfer of surface contamination during cutting operations, comprising:

coating, prior to cutting through a target surface, at least one of: a cutting implement or a portion thereof; and the target surface or a portion thereof with an adherent sacrificial composition layer, wherein the sacrificial layer is partially transferable between the cutting implement and the target surface during cutting, whereby a protective layer is provided to the cutting implement surface while cutting through the target surface.

12. The method of claim 11, wherein the adherent sacrificial composition comprises at least one agent selected from the group consisting of: from about 0.1 to about 25% (wt) of a gelling or thickening agent; from about 0.1 to about 10% (wt) of an emulsifier or stabilizer; from about 0.05 to about 10% (wt) of a surfactant; and an antimicrobial agent.

13. The method of claim 12, wherein the adherent sacrificial composition further comprises from about 0.1 to about 15% (wt), or about 1 to about 5% (wt), of one or more C₁₋₁₀ alcohols.

14. The method of claim 12, wherein the gelling or thickening agent is present in an amount selected from the group consisting of from about 0.1 to about 4% (wt), from about 5 to about 15% (wt), and about 2.5% (wt), and is selected from the group consisting of pectin, methylated pectin, gelatin, hydrosylated gelatin, agar, cornstarch, cross-linked starch, depolymerized starch, gelling vegetable protein product, sodium alginate, carrageenan, and combinations thereof

15. The method of claim 12, wherein the emulsifier or stabilizer is present in an amount selected from the group consisting of from about 0.1 to about 1% (wt), from about 1 to about 5% (wt), and about 0.2% (wt), and is selected from the group consisting of calcium lactate, lecithin, glycerol, and combinations thereof.

16. The method of claim 12, wherein the surfactant is present in an amount selected from the group consisting of from about 0.05 to about 0.5% (wt), from about 1 to about 5% (wt), and about 0.2% (wt), and is selected from the group consisting of sodium lauryl sulfate, Tween 20, 40, 60, and 80, and combinations thereof.

17. The method of claim 12, wherein the antimicrobial agent is at least one of an acidic agent and a basic agent, present in an amount selected from the group consisting of from about 0.1 to about 15% (wt), from about 1 to about 5% (wt), and about 2% (wt), suitable to impart a pH of less than about 3, or greater than about 10, and is selected from the group consisting of acetic acid, citric acid, and lactic acid, acidified calcium sulfate, acidified sodium chlorite, peracetic acids, percarbonates, ammonium hydroxide, quaternary ammonium salts, cetylpyridinium chloride, polyphosphates, glycolic acid, sodium metasilicate, trisodium phosphate, and combinations thereof.

18. The method of claim 12, wherein the antimicrobial agent is selected from the group consisting of proteases, lipases and phospholipases, alcohols, and combinations thereof

19. The method of claim 12, wherein the antimicrobial agent is heat.

20. The method of claim 11, further comprising, prior to coating, heating the adherent sacrificial composition to a temperature equal to or greater than 80°C.

21. The method of claim 11, wherein the adherent sacrificial composition is provided as a formulation selected from the group consisting of semi-solids, gels, liquids, syrups,

aerosolized formulations, foams, colloidal suspensions, and combinations thereof.

22. An antimicrobial barrier composition, comprising:

from about 0.1 to about 25% (wt) of a gelling or thickening agent;

from about 0.1 to about 10% (wt) of an emulsifier or stabilizer;

5 from about 0.05 to about 10% (wt) of a surfactant; and

an antimicrobial agent.

23. The antimicrobial barrier composition of claim 22, further comprising from about 0.1 to about 15% (wt), or about 1 to about 5% (wt), of one or more C₁₋₁₀ alcohols.

24. The antimicrobial barrier composition of claim 22, wherein the gelling or
10 thickening agent is present in an amount selected from the group consisting of from about 0.1 to about 4% (wt), from about 5 to about 15% (wt), and about 2.5% (wt), and is selected from the group consisting of pectin, methylated pectin, gelatin, hydrosylated gelatin, agar, cornstarch, cross-linked starch, depolymerized starch, gelling vegetable protein product, sodium alginate, carrageenan, and combinations thereof.

15 25. The antimicrobial barrier composition of claim 22, wherein the emulsifier or stabilizer is present in an amount selected from the group consisting of from about 0.1 to about 1% (wt), from about 1 to about 5% (wt), and about 0.2% (wt), and is selected from the group consisting of calcium lactate, lecithin, glycerol, and combinations thereof.

20 26. The antimicrobial barrier composition of claim 22, wherein the surfactant is present in an amount selected from the group consisting of from about 0.05 to about 0.5% (wt), from about 1 to about 5% (wt), and about 0.2% (wt), and is selected from the group consisting of sodium lauryl sulfate, Tween 20, 40, 60, and 80, and combinations thereof.

27. The antimicrobial barrier composition of claim 22, wherein the antimicrobial
25 agent is at least one of an acidic agent and a basic agent, present in an amount selected from the group consisting of from about 0.1 to about 15% (wt), from about 1 to about 5% (wt), and about 2% (wt), suitable to impart a pH of less than about 3, or greater than about 10, and is selected from the group consisting of acetic acid, citric acid, and lactic acid, acidified calcium sulfate, acidified sodium chlorite, peracetic acids, percarbonates, ammonium hydroxide, quaternary ammonium salts, cetylpyridinium chloride, polyphosphates, glycolic acid, sodium metasilicate,

trisodium phosphate, and combinations thereof.

28. The antimicrobial barrier composition of claim 22, where the antimicrobial agent is selected from the group consisting of proteases, lipases and phospholipases, alcohols, and combinations thereof

5 29. The antimicrobial barrier composition of claim 22, wherein the antimicrobial agent is heat.

30. The antimicrobial barrier composition of claim 22, provided as a formulation selected from the group consisting of semi-solids, gels, liquids, syrups, aerosolized formulations, foams, colloidal suspensions, and combinations thereof.